

Rejections

A. 35 U.S.C. § 102

The Examiner rejected claims 8 and 20 as being anticipated by the applicant's admitted prior art shown in FIG. 1 of U.S. patent number 5,302,966. The rejection is respectfully traversed.

The applicant's claim 8 recites a step of "varying, during each of said ILLUMINATE periods, a voltage on the data line to selectively illuminate said electroluminescent cell in response to said voltage and said data." In contrast, the disclosure at column 2, lines 35-48 that describes FIG. 1 of the '966 patent does not vary the "voltage on the data line" during the ILLUMINATE periods. In the prior art the data line voltage, once stored in capacitor 22 (of FIG. 1), is removed. There is no voltage applied to the data line nor varied on the data line during an ILLUMINATE period to "selectively illuminate said electroluminescent cell in response to said voltage and said data." As such, a feature of claim 8 is not disclosed in the admitted prior art in the '966 patent. Therefore, the applicant submits that claim 8 is not anticipated by the teachings of FIG. 1 in the '966 patent and, as such, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

The applicant's claim 20 recites, in part, that "during each of said ILLUMINATE periods, in response to a state of said stored data signal, said control circuit applies pulsed energy from a power supply means to a second electrode of said electroluminescent cell for a particular period of time." In contrast, the disclosure at column 2, lines 35-48 which describes FIG. 1 of the '966 patent applies a steady state high voltage to the cell without regard for the data. Upon application of the high voltage, if cell activating data (a value representing a "one") is stored in the cell, the cell illuminates. However, if the cell activity data is a value representing a "zero", the cell does not illuminate when the high voltage is applied. The prior art simply does not apply "pulsed energy from a power supply means

to a second electrode of said electroluminescent cell for a particular period of time." As such, a feature of claim 20 is not disclosed in FIG.1 of the '966 patent. Therefore, the applicant submits that claim 20 is not anticipated by the teachings of the admitted prior art and as such, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable.

B. 35 U.S.C. § 103

The Examiner has rejected claims 22, 25 and 27 as being unpatentable over the admitted prior art of FIG. 1 in the '966 patent. The rejection is respectfully traversed.

As discussed above, the text that describes FIG. 1 in the '966 patent describes a cell control circuit that merely stores a data value on the capacitor 22 and then, when the steady state high voltage is applied to the cell, the cells that are active (i.e., have a data value stored in the cell) become illuminated. There is no gray scale control of a cell's illumination. Claims 22 and 27 recite that "a number of ILLUMINATE and LOAD periods . . . is equivalent to a number of bits used to define a number of levels of gray." The prior art disclosure related to FIG. 1 of the '966 patent does not disclose nor suggest associating a number of bits in the gray scale levels with the number of LOAD and ILLUMINATE periods. The fact that flat panel display devices having 4 bits of data are used to produce 16 levels of gray scale would not lead one skilled in the art to associate the number of bits to the number of LOAD and ILLUMINATE periods. Neither the cited prior art nor the skill in the art or any combination thereof would suggest or teach the present invention as recited in claims 22 and 27. Therefore, the applicant submits that claims 22 and 27, as they now stand, fully satisfy the requirements of 35 U.S.C. § 103 and is patentable thereunder.

Claim 25 recites a particular control circuit structure having both the first and second transistor sources coupled to the data line. The prior art FIG. 1 discloses a completely different control circuit structure having the source of the second

transistor coupled to ground. There is no suggestion or disclosure of coupling the source of the second transistor to the data line to provide the gray scale function of the present invention. Therefore, the applicant submits that claim 25 fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

C. 35 U.S.C. § 103

The Examiner has rejected claims 10-12 as being unpatentable over the admitted prior art in the '966 patent in view of Koenck et al. (US patent number 5,576,601). The rejection is respectfully traversed.

The applicant's claim 8 recites a step of "varying, during each of said ILLUMINATE periods, a voltage on the data line to selectively illuminate said electroluminescent cell in response to said voltage and said data." Claims 10-12 further define the voltage that is applied to the data line (i.e., the voltage is a linear ramp, stepped or pulsed). In contrast, the disclosure at column 2, lines 35-48 which describes FIG. 1 of the '966 patent does not vary the "voltage on the data line" during the ILLUMINATE periods. The data line voltage, once stored in capacitor 22 (of FIG. 1), is removed. There is no voltage applied to the data line nor applied on the data line during an ILLUMINATE period to "selectively illuminate said electroluminescent cell in response to said voltage and said data." The Examiner cites Koenck et al. as disclosing a linear ramp or step function to produce illumination. The control circuit of the prior art of FIG. 1 does not provide for a way of applying a variable voltage to the data line during an ILLUMINATE period to produce a gray scale illumination. Since the circuit of Koenck et al. is not a transistor-based circuit, Koenck et al. does not teach or suggest any way of modifying the admitted prior art to produce a gray scale control circuit that would "selectively illuminate said electroluminescent cell in response to said voltage and said

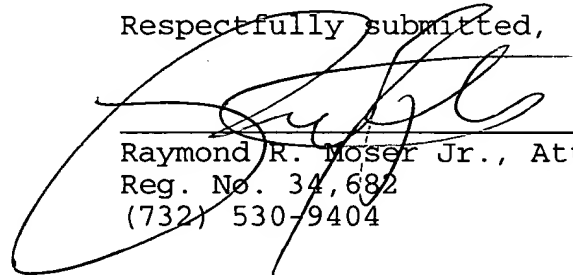
data." The mere disclosure of ramp and step voltages in Koenck et al. is not sufficient to overcome the lack of disclosure in the admitted prior art for a gray scale control method that applies a voltage to the data line during an ILLUMINATE period that selectively controls the illumination of the cell in view of both the data and the applied voltage. As such, a feature of claims 10-12 is not disclosed in the admitted prior art, the Koenck et al. patent, or any reasonable combination thereof. Therefore, the applicant submits that claims 10-12 fully satisfy the requirements of 35 U.S.C. § 103 and are patentable thereunder.

Conclusion

Thus, the applicant submits that none of the claims, presently in the application, is anticipated under the provisions of 35 U.S.C. § 102 or obvious under the provisions of 35 U.S.C. § 103. Consequently, the applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Raymond R. Moser Jr., Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,


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